

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-25 (Canceled).

Claim 26 (Currently Amended): A method for removing impurities out of an exhaust gas discharged from a chamber used for depositing metallic films on objects, comprising:

discharging the exhaust gas containing impurities generated from a process selected from the group consisting of: (i) a process for depositing TiN on an object by using  $\text{TiCl}_4$ , (ii) a process for depositing WN on an object by using  $\text{WF}_6$ , (iii) a process for depositing W on an object by using  $\text{WF}_6$ , (iv) a process for depositing WSi on an object by using  $\text{WF}_6$  and (v) a process for depositing  $\text{Ta}_2\text{O}_5$  on an object by using pentoethoxy tantalum;

injecting a reactant gas ~~seected~~ selected from the group consisting of an oxygen-containing gas, water and ammonia into the exhaust gas, wherein the reactant gas reacts with the impurities to form reaction by products which have a lower vapor pressure than the vapor pressure of the impurities, and

passing the reaction by product-containing gas through a condenser, wherein the reaction by-products are condensed out of the exhaust gas.

Claims 27-33 (Canceled).

Claim 34 (Previously Presented): A method for removing an impurity gas discharged from a process apparatus used for processing objects by using a process gas, comprising:

evacuating an interior of the process apparatus, thereby drawing the impurity gas through an exhaust pipe connecting the process apparatus and a trap mechanism;

mixing a reaction gas to react with the impurity gas within the exhaust pipe at a location between the process apparatus and the trap mechanism to convert the impurity gas to reaction by-products having a lower vapor pressure than that of the impurity gas; and

controlling a temperature of the trap mechanism to condense the reaction by-products so that the trap mechanism traps the condensed reaction by-products.

Claim 35 (Currently Amended): The impurity gas removing method according to claim 34, wherein said reaction gas is the same as a gas contained in the process gas.

Claim 36 (Previously Presented): The impurity gas removing method according to claim 34, wherein a supply amount of said reaction gas mixed with the impurity gas is at least twice that of the impurity gas.

Claim 37 (Previously Presented): The impurity gas removing method according to claim 34, wherein said process gas includes  $\text{TiCl}_4$ , and said reaction gas includes  $\text{NH}_3$ .

Claim 38 (Previously Presented): The impurity gas removing method according to claim 34, wherein said process gas includes  $\text{WF}_6$ , and said reaction gas includes  $\text{NH}_3$ .

Claim 39 (Currently Amended): A method for removing impurity gas discharged from a process apparatus used for processing objects by using a process gas, comprising:  
evacuating an interior of the process apparatus and a trap mechanism;  
condensing the impurity gas so that the condensed impurities are trapped in the trap mechanism; and

contacting an oxidative gas with the condensed impurities trapped in the trap mechanism to oxidize the condensed impurities, thereby stabilizing the condensed impurities.

Claim 40 (Previously Presented): The impurity gas removing method according to claim 39, when said oxidative gas is made to contact said condensed impurities in said trap mechanism, said process apparatus is evacuated with an inverse diffusion coefficient by an exhaust bypass pipe by a pump provided to bypass said trap mechanism, the inverse diffusion coefficient being set so that the oxidative gas is prevented from being introduced into the process apparatus through the exhaust bypass pipe.

Claim 41 (Previously Presented): The impurity gas removing method according to claim 39, wherein said oxidative gas is contacted at a pressure higher than that needed at a time of evacuating said trap mechanism and the contacting and evacuating of the oxidative gas is repeated a plurality of times.

Claim 42 (Previously Presented): The impurity gas removing method according to claim 39, wherein said reaction by-product is a product produced as a cleaning gas reacts with a by-product of a film deposition gas.

Claim 43 (Previously Presented): The impurity gas removing method according to claim 39, wherein said process gas is one of a titanium-containing gas, tungsten-containing gas, tantalum-containing gas and silicon-containing gas.

Claim 44 (Previously Presented): The impurity gas removing method according to claim 39, wherein said oxidative gas comprises an oxygen-containing gas.

Application No. 09/718,483  
Reply to Office Action of September 2, 2003.

Claims 45-49 (Canceled).